

applying the phosphor paste in an amount sufficient to substantially fill the cavity.

30. The method as recited in claim 29, further comprising:

selecting the content of phosphor in the phosphor paste to be in a range from 10% to 50%, by weight, when the desired thickness of the phosphor layer is selected in a range of from 10 microns to 50 microns, respectively.

31 The method as recited in claim 28, wherein the phosphor paste further comprises a thickening agent and an organic solvent.

32. The method as recited in claim 31, wherein the thickening agent is selected from the group consisting of cellulose and acrylic resin thickening agents.

33. The method as recited in claim 31, wherein the organic solvent is selected from the group consisting of alcohol and ester solvents.

34. The method as recited in claim 28, further comprising:

applying the phosphor paste within the cavity and firing same so as to form the phosphor layer covering a bottom portion of the cavity including the address electrode.

35. The method as recited in claim 28, further comprising:

applying the phosphor paste within the cavity and firing same so as to form the phosphor stripe extending continuously from the bottom of the cavity onto, and covering, the respective opposing sidewalls of the barriers defining the cavity.

36. The method as recited in claim 35, wherein the phosphor layer is formed on the opposing sidewalls of the adjacent barriers in a height not exceeding a height of the barriers.

37. ~~A method of forming a phosphor layer in a discharge cell of a surface discharge type plasma display panel, wherein a pair of barriers extending in a first direction in a first~~

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~~substrate are spaced apart in parallel relationship in a second direction, transverse to the first direction, and define a cavity therebetween, bounded by respective opposing sidewalls of the pair of barriers and extending commonly therewith in the first direction, an address electrode being disposed on the first substrate, bottom of the cavity and extending in the first direction:~~

~~depositing a phosphor paste within the cavity, the phosphor paste having a content of phosphor in a range of from 10% to 50%, by weight; and~~

~~firing the phosphor paste to form the phosphor layer.~~

38. The method as recited in claim 37, further comprising:

selecting the weight percentage of the phosphor in the paste in accordance with the desired thickness of the phosphor layer, after firing the paste; and

applying the phosphor paste in an amount sufficient to substantially fill the cavity.

39. The method as recited in claim 38, further comprising:

selecting the content of phosphor in the phosphor paste to be in a range from 10% to 50%, by weight, when the desired thickness of the phosphor layer is selected in a range of from 10 microns to 50 microns, respectively.

40 The method as recited in claim 37, wherein the phosphor paste further comprises a thickening agent and an organic solvent.

41. The method as recited in claim 40, wherein the thickening agent is selected from the group consisting of cellulose and acrylic resin thickening agents.

42. The method as recited in claim 40, wherein the organic solvent is selected from the group consisting of alcohol and ester solvents.

43. The method as recited in claim 37, further comprising:

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a/ applying the phosphor paste on the first substrate within the cavity and firing same so as to form the phosphor layer covering a bottom portion of the cavity including the address electrode.

44. The method as recited in claim 37, further comprising:

applying the phosphor paste on the first substrate within the cavity and firing same so as to form the phosphor layer extending continuously from the bottom of the cavity onto, and covering, the respective opposing sidewalls of the barriers defining the cavity.

45. The method as recited in claim 44, wherein the phosphor layer is formed on the opposing sidewalls of the adjacent barriers in a height not exceeding a height of the barriers.

46 A method of forming phosphor layers in an array of discharge cells formed on a first substrate of a plasma display panel of a surface discharge type, the array comprising plural columns, in a first direction, and plural rows, in a second direction transverse to the first direction, of plural unit luminescent areas, each unit luminescent area comprising a respective set of a common number of discharge cells, wherein each discharge cell comprises:

a cavity bounded by respective opposing and spaced sidewalls of a pair of parallel barriers formed on a first substrate, the cavity extending commonly with the pair of barriers in a first direction;

an address electrode on the first substrate, bottom of the cavity and extending in the first direction;

a pair of display electrodes formed in parallel, spaced relationship on a surface of a second substrate covered by an insulating layer and positioned in opposed relationship with the barriers, the pair of display electrodes extending in a second direction, transversely to the barriers and the first direction, and the pair of display electrodes defining an individual display cell within the cavity, the method comprising:

depositing a phosphor paste having a content of phosphor in a range of from 10% to 50%, by weight, on one of the first and second substrates; and

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firing the phosphor paste so as to form a phosphor layer in each discharge cell, extending between the respective opposing sidewalls of the barriers.

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47. The method as recited in claim 37, further comprising:
selecting the weight percentage of the phosphor in the paste in accordance with the desired thickness of the phosphor layer, after firing the paste; and
applying the phosphor paste in an amount sufficient to substantially fill each cavity.

48. The method as recited in claim 47, further comprising:
selecting the content of phosphor in the phosphor paste to be in a range from 10% to 50%, by weight, when the desired thickness of the phosphor layer is selected in a range of from 10 microns to 50 microns, respectively.

49. The method as recited in claim 46, wherein the phosphor paste further comprises a thickening agent and an organic solvent.

50. The method as recited in claim 46, wherein the thickening agent is selected from the group consisting of cellulose and acrylic resin thickening agents.

51. The method as recited in claim 46, wherein the organic solvent is selected from the group consisting of alcohol and ester solvents.

52. The method as recited in claim 46, further comprising:
applying the phosphor paste on the first substrate within the cavity and firing same so as to form the phosphor layer covering a bottom portion of the cavity including the address electrode.

53. The method as recited in claim 46, further comprising:

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applying the phosphor paste on the first substrate within the cavity and firing same so as to form the phosphor layer extending continuously from the bottom of the cavity onto, and covering, the respective opposing sidewalls of the barriers defining the cavity.

54. The method as recited in claim 53, wherein the phosphor layer is formed on the opposing sidewalls of the adjacent barriers in a height not exceeding a height of the barriers.

55. A discharge cell of a surface discharge type plasma display panel, comprising:
a pair of barriers extending in a first direction on a first substrate and spaced apart in parallel relationship in a second direction transverse to the first direction and with a cavity therebetween, bounded by respective opposing sidewalls of the pair of barriers and extending commonly therewith in the first direction;

an address electrode on the first substrate, extending in the first direction;

a pair of display electrodes formed in parallel, spaced relationship on a surface of a second substrate, covered by an insulating layer and positioned in opposed relationship with the barriers, the pair of display electrodes extending in the second direction, transversely to the barriers, and the spacing between the pair of display electrodes defining an individual display cell within the cavity; and

a phosphor layer disposed within the cavity formed by firing a phosphor paste on one of the first and second substrates and firing same so as to form the phosphor layer extending between the barriers and throughout the cell, the phosphor paste having a content of phosphor in a range of from 10% to 50%, by weight, to produce a selected thickness of the phosphor layer in a range of from 10 to 50 microns, respectively.

56. A composition for forming a phosphor layer in a cavity of a discharge cell of a substrate of a surface discharge type plasma display panel, comprising:

a phosphor paste having a content of phosphor in a range of from 10% to 50%, by weight.